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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,644	12/17/2003	Hiroyuki Ogi	118118	3825
25944	7590	01/11/2006	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			LE, DANG D	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/736,644	Applicant(s) OGI, HIROYUKI	
	Examiner Dang D. Le	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/31/05 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-4 and 9 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akichika (JP 2002-3000756) in view of JP 64-8872.

Regarding claim 1, Akichika shows an ac generator for a vehicle (Figure 1), comprising:

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- A housing including a drive frame (4 right), a rear frame (4 left) and a rear cover (7),
- A rotor (3), supported by said housing, for providing a magnetic field;
- A cooling fan (36) fixed to said rotor for taking cooling air from outside of the rear cover;
- A stator (2) , supported by said housing and disposed around said rotor, said stator having a stator core in which a plurality of phase-windings (23) is mounted to generate electromotive force when the magnetic field is supplied; and
- A rectifying unit (6) disposed in the rear cover and formed by a bridge circuit which includes positive electrode side rectifying elements and negative electrode side rectifying elements respectively connected to the plurality of phase-windings,
- Wherein the rectifying unit (Figure 3) comprises a semicircular positive electrode side heat sink (67) to which the positive electrode side rectifying elements are fixed and a semicircular negative electrode side heat sink (68) to which the negative electrode side rectifying elements are respectively fixed, respectively disposed in two planes that are perpendicular to a rotation axis of said rotor,
- Wherein said negative electrode side heat sink comprises a pair of separate semicircular plates (68A, 68B, Figure 4) that have a larger outside diameter

(Figure 1) than the positive electrode side heat sink to utilize cooling air taken by said cooling fan from outside of the rear covers.

Akichika does not show one of the negative electrode side rectifying elements connected to at least a portion of the plurality of phase-windings is constituted of parallelly connected two elements that are respectively fixed to the semicircular members to equally divide current flowing therethrough.

JP 64-8872 shows one of the negative electrode side rectifying elements connected to at least a portion of the plurality of phase-windings is constituted of parallelly connected two elements to equally divide current flowing therethrough (Figure 1) for the purpose of reducing heat.

Since Akichika and JP 64-8872 are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to connect one of the negative electrode side rectifying elements connected to at least a portion of the plurality of phase-windings is constituted of parallelly connected two elements to equally divide current flowing therethrough as taught by JP 64-8872 for the purpose discussed above.

Regarding claims 2-4, it is noted that JP 64-8872 also shows all of the limitations of the claimed invention including the zener and normal diodes.

Regarding claim 9, it is noted that Akichika also shows all of the limitations of the claimed invention in Figure 1 (negative heat sink is to the left of positive heat sink).

Information on How to Contact USPTO

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D. Le whose telephone number is (571) 272-2027. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

1/8/06

A handwritten signature in black ink, appearing to read 'Dang D. Le', is written in a cursive style.

DANG LE
PRIMARY EXAMINER